Ethylene - Propylene Rubber (EPR)

Grades	Propylene content %	Mooney viscosity ML (1+4) 125°C	Oil content %	Physical form (2)	Unsaturation level	Main applications
Copolymers						
Dutral CO 034	28	44 *(1)*	-	B, PL	-	Cables, appliances, polymer modification, V.I.I.
Dutral CO 038	28	60	-	B, FB, FF, PL	-	Automotive, cables, appliances, polymer modification, V.I.I.
Dutral CO 043	45	34 *(1)*	-	B	-	Automotive, cables, appliances, polymer modification, V.I.I., bitumen modification
Dutral CO 054	41	44 *(1)*	-	B	-	Automotive, cables, mechanical goods, building, bitumen modification, polymer modification
Dutral CO 058	50	80 *(1)*	-	B	-	Appliances polymer modification, V.I.I.
Dutral CO 059	41	79	-	B	-	Polymer modification
Dutral CO 555	44	31	48	B	-	Automotive, cables, mechanical goods, building, polymer modification

Grades	Propylene content %	Mooney viscosity ML (1+4) 125°C	Oil content %	Physical form (2)	Unsaturation level	Main applications
Terpolymers*						
Dutral TER 4028	25	60	-	FB, FF, PL	Medium	Automotive, cables, mechanical goods, building
Dutral TER 4033	25	30 *(1)*	-	FB, PL	Medium	Automotive, cables, polymer modification
Dutral TER 4038 EP	27	60	-	EP, FB, FF, PL	Medium	Automotive, cables, mechanical goods, building, appliances
Dutral TER 4044	35	44*(1)*	-	B	Medium	Automotive, cables, mechanical goods, building
Dutral TER 4047	40	55	-	B	Medium	Automotive, mechanical goods, building
Dutral TER 4049	40	76	-	B	Medium	
Dutral TER 4334	27	28	30	B	Medium	Automotive, mechanical goods, cables, building, appliances
Dutral TER 4436	28	43	40	B	Medium	Automotive, appliances
Dutral TER 4535	32	32	50	B	Medium	Automotive, mechanical goods, building, appliances
Dutral TER 6148	40	65	15	B	High	Automotive, mechanical goods, building, appliances
Dutral TER 6235	32	33	23	B	High	
Dutral TER 6537	32	43	50	B	High	Automotive, building, appliances
Dutral TER 9046	31	67 *(1)*	-	B	Very High	

Grades	(230¡C-5Kg) g/10 mins	Ash wt. max %	Volatiles wt. max %	Physical form (2)	g/30 pellets	Main applications
Polyolefin Modifiers						
Dutral PM 06 PLE	1.8	0.3	0.2	PL	0.45	
Dutral PM 8273	2.4	0.3	0.2	PL	0.45	
Dutral PM 8276	7	0.3	0.2	PL	0.45	

Grade	Propylene content %	MFI (230¡C-5Kg) g/10 mins	Ash wt. max %	Volatiles wt. max %	Physical form (2)	Main applications
Oil Modifiers						
Dutral OCP 2530 PL	8.5	0.4	0.2	PL (*)	34	Oil viscosity modifier

(1) ML (1+4) 100¡C
(2) B= bales; EP= friable easy processing bales; FF= free flowing crumbs; PL= pellets; FB= friable bales; PL (*) = NON-FREE FLOWING PELLETS

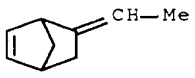
Storage conditions: store in vented, dry area at temperatures between 20¡C and 30¡C; no direct sunlight. Please consult the relevant safety data sheet for more detailed information.

IT Styrene-butadiene rubber, properties
Synthetic rubber, properties
(oil absorbents based on styrene-butadiene rubber)
IT Petroleum products
(oils; oil absorbents based on
styrene-butadiene rubber)
IT Polymer degradation
(photochem.; oil absorbents based on styrene-butadiene
rubber)
IT 33219-26-0, Butadiene-ethylene-ethylidenenorbornene-propylene-
styrene copolymer 35255-73-3, Butadiene-4-tert.-butylstyrene-styrene
copolymer 579435-96-4,
Butadiene-4-tert.-butylstyrene-ethylene-ethylidenenorbornene-propylene-
styrene-copolymer
(oil absorbents based on styrene-butadiene rubber)
IT 9003-55-8
(styrene-butadiene rubber, oil absorbents based on
styrene-butadiene rubber)
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L57 ANSWER 15 OF 51 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:891462 HCAPLUS Full-text
DOCUMENT NUMBER: 140:147471
TITLE: Atomic force microscopy in analysis of
rubber materials
AUTHOR(S): Yerina, Natalya; Magonov, Sergei
CORPORATE SOURCE: Digital Instruments/Veeco Metrology Group, Santa
Barbara, CA, USA
SOURCE: Rubber Chemistry and Technology (2003), 76(4),
846-859
CODEN: RCTEA4; ISSN: 0035-9475
PUBLISHER: American Chemical Society, Rubber Division
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 14 Nov 2003
AB Atomic force microscopy (AFM) and elec. force microscopy (EFM) have been applied for compositional mapping of a number of elastomers and related multicomponent materials. Several aspects of optimizing AFM expts. on polymers are discussed. AFM images revealed changes of EPDM morphol. caused by crosslinking and by loading with fillers [carbon black (CB) and silica particles] and oil. It was shown that the morphol. of isotactic polypropylene (iPP)/EPDM vulcanizates, which were studied with AFM and EFM, depends on the ratio of components, degree of cure and processing conditions. Diffusion of oil from the elastomer component to the matrix is evidenced in the AFM images. Selective distribution of CB in the iPP matrix is responsible for the elec. conductivity of the thermoplastic vulcanizate.
IT 25038-36-2, Ethylene-ethylidenenorbornene-propene copolymer
(anal. of compounded rubber materials by atomic force
microscopy)
RN 25038-36-2 HCAPLUS
CN Bicyclo[2.2.1]hept-2-ene, 5-ethylidene-, polymer with ethene and
1-propene (CA INDEX NAME)

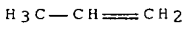
CM 1

CRN 16219-75-3
CMF C9 H12



CM 2

CRN 115-07-1
CMF C3 H6



CM 3

CRN 74-85-1
CMF C2 H4

CC 39-9 (Synthetic Elastomers and Natural Rubber)
ST atomic force microscopy compounded rubber analysis
IT Styrene-butadiene rubber, properties
(Duradene 706; anal. of compounded rubber materials by atomic force microscopy)
IT Atomic force microscopy
(anal. of compounded rubber materials by atomic force microscopy)
IT Styrene-butadiene rubber, properties
(block; anal. of compounded rubber materials by atomic force microscopy)
IT EPDM rubber
(ethylene-ethylidenenorbornene-propene, Dutral TER; anal. of compounded rubber materials by atomic force microscopy)
IT Carbon black, uses
(filler; anal. of compounded rubber materials by atomic force microscopy)
IT Styrene-butadiene rubber, properties
(hydrogenated, block, triblock; anal. of compounded rubber materials by atomic force microscopy)
IT 25038-36-2, Ethylene-ethylidenenorbornene-propene copolymer
25085-53-4, Isotactic polypropylene
(anal. of compounded rubber materials by atomic force microscopy)
IT 7631-86-9, Silica, uses
(filler; anal. of compounded rubber materials by atomic force microscopy)

IT 9003-55-8
(styrene-butadiene rubber, Duradene 706; anal. of compounded rubber materials by atomic force microscopy)
IT 106107-54-4
(styrene-butadiene rubber, block; anal. of compounded rubber materials by atomic force microscopy)
IT 694491-73-1
(styrene-butadiene rubber, hydrogenated, block, triblock; anal. of compounded rubber materials by atomic force microscopy)
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 16 OF 51 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:668759 HCAPLUS Full-text
DOCUMENT NUMBER: 140:272153
TITLE: Effects of composition and processing conditions on morphology and properties of thermoplastic elastomer blends of SEBS/PP/oil and of dynamically vulcanized EPDM/PP/oil
AUTHOR(S): Sengupta, P.; Noordermeer, J. W. M.
CORPORATE SOURCE: Dutch Polymer Institute, Department of Rubber Technology, Faculty of Science and Technology, University of Twente, Enschede, 7500 AE, Neth.
SOURCE: Technical Papers - American Chemical Society, Rubber Division, Spring Technical Meeting, 163rd, San Francisco, CA, United States, Apr. 28-30, 2003 (2003), 149-176. American Chemical Society, Rubber Division: Akron, Ohio.
CODEN: 69EHXX
DOCUMENT TYPE: Conference; (computer optical disk)
LANGUAGE: English
ED Entered STN: 27 Aug 2003
AB Thermoplastic elastomer blends of hydrogenated triblock SBR (SEBS)/polypropylene (PP)/oil and dynamically vulcanized blends of EPDM/PP/oil (TPV's) are competitive materials used for similar sorts of applications. This work presents a comparative study of the morphol. and structure related properties of thermoplastic elastomer blends based on SEBS/PP/oil and dynamically vulcanized EPDM/PP/oil prepared under identical conditions. Compns. of each blend type with three different SEBS/PP and EPDM/PP ratios by weight were made in a co-rotating twin-screw extruder and a Brabender internal mixer. A combination of transmission electron microscopy (TEM), conventional SEM and low voltage SEM (LVSEM) was used to study the morphol. of these highly oil extended blends. Morphol. characterization showed a co-continuous morphol. for the SEBS/PP/oil blends and droplet-matrix morphol. for the TPV blends. The particle size distribution of the EPDM phases in the TPV's prepared in the twin-screw extruder was wider than for the Brabender mixer. No difference in the morphol. was observed for the SEBS/PP/oil blends prepared in the twin-screw extruder and Brabender, except at a SEBS/PP ratio of 45/55 percent by weight The gel content of the TPV's was found to be the main factor determining the stress-strain properties, as influenced by the preparation method. Also the crystallinity of the PP-phase for both SEBS/PP/oil and TPV blends was investigated and, although being dependent on the preparation method for the SEBS/PP/oil blends, did not reflect in the stress-strain properties.
IT 25038-36-2, Ethylene-ethylidenenorbornene-propene copolymer
(rubber, polypropylene/oil blends, dynamically vulcanized; effects of composition and processing conditions on morphol. and properties of thermoplastic elastomer blends)
RN 25038-36-2 HCAPLUS